Application No.: 09/831,546

Docket No.: HO-P02186US0

## **COMPLETE LISTING OF CLAIMS**

## IN ASCENDING ORDER WITH STATUS INDICATOR

- 1-19 (cancelled)
- 20. (currently amended) A *Bacillus* strain capable of growth and sporulation comprising:
- (a) a homologous *spoIIIE* gene from another bacterium partly or wholly replacing an endogenous *spoIIIE* gene; and
- b) two reporter genes, wherein each reporter gene is operatively linked to a promoter and responsive to the action of  $\sigma^F$  during sporulation; and wherein the first reporter gene is located in a segment of [the] <u>a</u> DNA that is trapped in a prespore compartment when SpoIIIE function is impaired and the second reporter gene is located outside said DNA segment.
- 21. (previously added) The *Bacillus* strain of claim 20, wherein the *spoIIIE* gene has been partly or wholly replaced by a homologous gene from *Streptoccus pneumoniae*.
- 22. (previously added) The *Bacillus* strain of claim 20, wherein the *Bacillus* strain is a *B. Subtilis*.
- 23. (previously added) A method of assessing an agent for antibiotic activity comprising the steps of:

incubating at least one Bacillus strain of claim 20, in the presence of the agent; and

observing expression of the reporter gene or genes; wherein expression of only one of two reporter genes indicates that the agent acts as an antibiotic.

24. (previously added) The method of claim 23, wherein the *Bacillus* strain is induced to sporulate in the presence of the agent.

25. (previously added) The method of claim 23, wherein the *Bacillus* strain is induced to sporulate and is contacted with the agent just prior to asymmetric cell division.

26. (previously added) A panel comprising a plurality *Bacillus* strains of claim 20, wherein

the *spoIIIE* gene of each *Bacillus* strain in the panel has been partly or wholly replaced by a homologous *spoIIIE* gene from different bacteria.

- 27. (previously added) A method of assessing an agent for antibiotic activity comprising the steps of:
- a) incubating a panel of different *Bacillus* strains of claim 26, in the presence of the agent; and
- b) observing expression of the reporter gene or genes; wherein expression of only one of two reporter genes in a strain indicates that the agent acts as an antibiotic.
- 28. (currently amended) A method of determining whether an agent inhibits SpoIIIE function in *Bacillus* species, comprising the steps of:

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inducing the Bacillus strain of claim 20 to sporulate in the presence of the agent, and

observing expression of the first and the second reporter gene; wherein expression of only one of two reporter genes indicates that the agent inhibits [the growth of the *Bacillus* strain.] SpoIIIE function in *Bacillus* species.

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29. (currently amended) A method for determining whether an agent inhibits the [growth] <u>outgrowth</u> of a bacterium comprising the steps of:

incubating a Bacillus strain of claim 20 in the presence of the agent, and

observing expression of the one or more reporter genes; wherein expression of only one of two reporter genes indicates that the agent inhibits the [growth] outgrowth of the *Bacillus* strain.

- 30. (currently amended) A method of killing or inhibiting the [growth] <u>outgrowth</u> of bacteria comprising contacting the bacteria with an agent identified by the method of claim 29.
- 31. (currently amended) A *Bacillus* strain capable of growth and sporulation comprising:

a homologous cell division gene from another bacterium partly or wholly replacing a cell division gene; and

two different reporter genes; wherein the first reporter gene has a promoter which is dependent on active  $\sigma^F$  or  $\sigma^E$  factor, and the second reporter gene provides a measure of the total synthesis of the [inactive]  $\sigma^F$  or  $\sigma^E$  factor.

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32. (currently amended) The *Bacillus* strains of claim 31, wherein the cell division gene is selected from group consisting of *divIB*, *divIC*, *divIA*, *ftsA*, [ftsA], ftsL, ftsZ and pbpB.

33. (previously added) The *Bacillus* strain of claim 31, wherein the *Bacillus* strain is a *B. subtilis* strain.

34. (previously added) A method of assessing an agent for antibiotic activity, comprising the steps of:

incubating at least one *Bacillus* strain of claim 31, in the presence of the agent; and observing expression of the reporter gene or genes; wherein reduced expression of the reporter gene which is dependent on active  $\sigma^F$  or  $\sigma^E$  factor is a measure of antibiotic activity.

- 35. (previously added) The method of claim 34, wherein the *Bacillus* strain is induced to sporulate in the presence of the agent.
- 36. (previously added) The method of claim 34, wherein the *Bacillus* strain is induced to sporulate and is contacted with the agent just prior to asymmetric cell division.
- 37. (previously added) A panel comprising a plurality *Bacillus* strains of claim 31, wherein the cell division gene of each *Bacillus* strain in the panel has been partly or wholly replaced by a homologous cell division gene from a different bacteria.

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38. (previously added) A method of assessing an agent for antibiotic activity, comprising the steps of:

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incubating a panel of different *Bacillus* strain of claim 37, in the presence of the agent; and

observing expression of the reporter gene or genes; wherein reduced expression of the reporter gene which is dependent on active  $\sigma^F$  or  $\sigma^E$  factor in a strain is a measure of antibiotic activity.

39. (previously added) A method of determining whether an agent inhibits cell division in *Bacillus* species, comprising the steps of:

inducing the *Bacillus* strain of claim 31 to divide asymmetrically in the presence of the agent; and

observing expression of the first and second reporter genes; wherein reduced expression of the reporter gene which is dependent on active  $\sigma^F$  or  $\sigma^E$  factor is a measure of cell division inhibition.

- 40. (currently amended) A method for determining whether an agent inhibits the [growth] outgrowth of a bacterium comprising the steps of:
  - (a) incubating a Bacillus strain of claim 31 in the presence of the agent; and
- (b) observing expression of the one or more reporter genes; wherein reduced expression of the reporter gene which is dependent on active  $\sigma^F$  or  $\sigma^E$  factor is a measure of [growth] <u>outgrowth</u> inhibition.

41. (currently amended) A method of <u>preparing a composition for use in killing</u> or inhibiting the [growth] <u>outgrowth</u> of bacteria, comprising <u>carrying out</u> [contacting the bacteria with an agent identified by] the method of claim 40 <u>and formulating the agent identified as being capable of inhibiting the outgrowth of bacteria into a composition for use in inhibiting the outgrowth of bacteria.</u>

42. (previously added) A *Bacillus* strain capable of growth and sporulation comprising;

a mutated *spoIIIE* gene, wherein the mutation results in blocking transfer of the prespore chromosome; and

a homologous spoOJ gene from another bacterium partly or wholly replacing an endogenous spoOJ gene; and

one or two different reporter genes, wherein at least one reporter gene is operatively linked to a promoter which is dependent on  $\sigma^F$  factor, and placed at a location wherein impaired SpoOJ function leads to increased trapping and increased expression in the prespore.

- 43. (previously added) The *Bacillus* strain of claim 42, further comprising a mutated *soj* gene.
- 44. (previously added) The *Bacillus* strain of claim 42, wherein the *Bacillus* strain is a *B. subtilis* strain.
- 45. (previously added) A method of assessing an agent for antibiotic activity, comprising the steps of:

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incubating at least one *Bacillus* strain of claim 42, in the presence of the agent; and observing expression of the reporter gene or genes; wherein increased expression of one of the reporter genes indicates the agent acts as an antibiotic.

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- 46. (previously added) The method of claim 45, wherein the *Bacillus* strain is induced to sporulate in the presence of the agent.
- 47. (previously added) The method of claim 45, wherein the *Bacillus* strain is induced to sporulate and is contacted with the agent just prior to asymmetric cell division.
- 48. (previously added) A panel comprising a plurality *Bacillus* strains of claim 42, wherein the *spoOJ* gene of each *Bacillus* strain in the panel has been partly or wholly replaced by a homologous *spoOJ* gene from different bacteria.
- 49. (previously added) A method of assessing an agent for antibiotic activity, comprising the steps of:
- (a) incubating the panel of *Bacillus* strains of claim 48, in the presence of the agent; and
- (b) observing expression of the reporter gene or genes; wherein increased expression of one of the reporter genes in a strain indicates the agent acts as an antibiotic.
- 50. (previously added) A method of determining whether an agent inhibits SpoOJ function in *Bacillus* species, comprising the steps of:

inducing the *Bacillus* strain of claim 42 to divide asymmetrically in the presence of the agent; and

observing expression of the first and second reporter gene; wherein increased expression of one of the reporter genes indicates that the agent inhibits SpoOJ function.

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51. (currently amended) A method for determining whether an agent inhibits the [growth] outgrowth of a bacterium comprising the steps of:

incubating a Bacillus strain of claim 42, in the presence of the agent; and

observing expression of the one or more reporter genes; wherein increased expression of one of the reporter genes indicates that the agent inhibits [growth] <u>outgrowth</u>.

52. (previously added) A method of killing or inhibiting the growth of bacteria, comprising contacting the bacteria with an agent identified by the method of claim 51.